

## ON $\varphi$ -CONVEX FUNCTIONS

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*Abstract.* In this paper we introduce the notion of  $\varphi$ -convex functions as generalization of convex functions. Some basic results under various conditions for the function  $\varphi$  are investigated. Moreover, we establish Jensen and Hermite-Hadamard type inequalities related to  $\varphi$ -convex functions. Also, the notions of  $\varphi_b$ -convex and  $\varphi_E$ -convex functions, which are generalization of  $\varphi$ -convex functions are introduced and some new results related to these new settings are obtained.

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